UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,359	06/23/2003	Boris Tsybakov	030202	8891

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EXAMINER
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ART UNIT	PAPER NUMBER
2619	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)	
Office Action Summary	10/602,359	TSYBAKOV ET AL.	
	Examiner	Art Unit	
	Andrew C. Lee	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _22 July 2008_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-17 and 29-36_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-6,8,9,12-17 and 29-36_ is/are rejected.
7)☒ Claim(s) _7,10,11_ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

Response to Amendment

1.   Claims 18 – 28 had been canceled.

Claims 1 – 17, 29 – 36 are pending.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

Claim 34 recites the limitation "the length of the dedicated orthogonal code"

inlines 2 – 3, and "the length of at least one of the plurality of orthogonal codes" in line

3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1, 6, 17, 29, 2, 8, 30, 3, 9, 31, 4, 12, 32 are rejected under 35 U.S.C.

103(a) as being unpatentable over Scherzer et al. (US 6901062 B2), and Kim et al. (US

6870824 B1) in view of Gopalakrishnan et al. (US 6930981 B1).

Regarding claims 1, 6, 17, 29, Scherzer et al. disclose a method of

communications, a communications station, computer-readable medium (Fig. 2, col. 6,

lines 4 – 21, col. 7, lines 2 - 12, "ASIC" as computer-readable medium), comprising: a

processor, means for dividing a plurality of subscriber stations into a plurality of groups

("to group the subscriber units into a number of groups (e.g. M groups)" interpreted as

dividing a plurality of subscriber stations into a plurality of groups; col. 9, lines 33 – 42);

assigning a different plurality of orthogonal codes to each of the groups (col. 10, lines 60

– 65), the number of the orthogonal codes assigned to one of the groups being less

than the number of subscriber stations in said one of the groups (col.11, lines 10 – 19);

encoding communications to one of the subscriber stations in said one of the groups at

a data rate (col. 17, lines 46 – 52); and

Scherzer et al. do not disclose plurality of orthogonal codes for supplemental

traffic channels.

Kim et al. teach plurality of orthogonal codes for supplemental traffic channels

(col. 8, lines 37 – 54).

At time the invention was made it would have been obvious to a person of

ordinary skill in the art to modify the teachings of Scherzer et al. to include the features

of plurality of orthogonal codes for supplemental traffic channels as taught by Kim et al.

One of ordinary skill in the art would be motivated to do so for designating forward

spreading code for spreading forward common control message or short packet user

data transmitted on a forward common channel (as suggested by Kim et al., see col. 3,

lines 17 – 19).

Kim et al. also disclose spreading codes and data rate (col. 8, lines 11 – 31).

Scherzer et al. and Kim et al. do not disclose determining whether to spread at least a portion of communications to said to one of the subscriber stations with one of the orthogonal codes assigned to said one of the groups as a function of the data rate.

Gopalakrishnan et al. in the same field of endeavor teach determining whether to spread at least a portion of communications to said to one of the subscriber stations with one of the orthogonal codes assigned to said one of the groups as a function of the data rate ("identifies a subset of standardized data rates using the available power and available Walsh code information received", and "the supportable data rate is not only a function of the available SNR but also the available Walsh codes"; Fig. 7, Fig. 8; col. 2, lines 61 – 67, col. 3, lines 1 – 8; col. 5, lines 10 – 14).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. and Kim et al. to include the features of determining whether to spread at least a portion of communications to said to one of the subscriber stations with one of the orthogonal codes assigned to said one of the groups as a function of the data rate as taught by Gopalakrishnan et al. in order to provide a method for data rate determination in a system where the available power fraction and available Walsh codes in each active leg are dynamically changing over time (as suggested by Gopalakrishnan et al., see col. 3, lines 48 – 51).

Regarding claims 2, 8, 30, Scherzer et al. disclose the method, computer-readable medium claimed further comprising allocating to said one of the subscriber stations one or more of the orthogonal codes assigned to said one of the groups, said one of the orthogonal codes being selected from the one or more of the orthogonal

codes allocated to said one of the subscriber stations (col. 10, lines 60 – 65, col. 11, lines 40 – 46).

Regarding claims 3, 9, 31, Scherzer et al. disclose the method, computer readable medium claimed further comprising allocating to each of the subscriber stations in said one of the groups one or more of the orthogonal codes assigned to said one of the groups (column 10, lines 60 – 65), and using each of the orthogonal codes in said one of the groups to spread at least a portion of communications to different subscriber stations in said one of the groups (column 11, lines 40 – 46),

Scherzer et al. and Kim et al. do not disclose the orthogonal code being used to spread said at least a portion of the communications to each of the different subscriber stations being selected from the respective one or more of the codes allocated thereto.

Gopalakrishnan et al. in the same field of endeavor teach the orthogonal code being used to spread said at least a portion of the communications to each of the different subscriber stations being selected from the respective one or more of the codes allocated thereto ("identifies a subset of standardized data rates using the available power and available Walsh code information received"; Fig. 7, Fig. 8; col. 2, lines 61 – 67, col. 3, lines 1 – 8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. and Kim et al. to include the features of the orthogonal code being used to spread said at least a portion of the communications to each of the different subscriber stations being selected from the respective one or more of the codes allocated thereto as taught by Gopalakrishnan et al. in order to provide an apparatus and method for determining the rate of a variable

rate encoded data frame (as suggested by Gopalakrishnan et al., see col. 3, lines 48 – 51).

Regarding claims 4, 12, 32, Scherzer et al. disclose the method, the communication station, and computer-readable medium claimed further comprising spreading a portion of the communications to said one of the subscriber stations with a orthogonal code assigned to the groups (col. 10, lines 60 – 65).

Scherzer et al. and Kim et al. do not disclose spreading a second portion of the communications to said one of the subscriber stations with a second orthogonal code different from each of the orthogonal codes assigned to the groups.

Gopalakrishnan et al. in the same filed of endeavor teach spreading a second portion of the communications to said one of the subscriber stations with a second orthogonal code different from each of the orthogonal codes assigned to the groups ("16-ary Codes 1" interpreted as spreading a second portion of the communications to said one of the subscriber stations with a second orthogonal code; Table 2, col. 6, lines 13 – 34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. and Kim et al. to include the features of spreading a second portion of the communications to said one of the subscriber stations with a second orthogonal code different from each of the orthogonal codes assigned to the groups as taught by Gopalakrishnan et al. in order to provide an apparatus and method for determining the rate of a variable rate encoded data frame (as suggested by Gopalakrishnan et al., see col. 3, lines 48 – 51).

5.   Claims **5, 13, 33, 35, 14, 15, 16, are** rejected under 35 U.S.C. 103(a) as being

unpatentable over Scherzer et al. (US 6901062 B2), Kim et al. (US 6870824 B1) and

Gopalakrishnan et al. (US 6930981 B1) as applied to claims **1, 6, 17, 29, 2, 8, 30, 3, 9,**

31, 4, 12, 32 above, and further in view of Czaja et al. (US 6424631 B1).

Regarding claims 5, 13, 33, 35, Scherzer et al. disclose the method, the

communication station, and computer-readable medium claimed further comprising

spreading a portion of the communications to said one of the subscriber stations with a

orthogonal code assigned to the groups (col. 10, lines 60 – 65).

Scherzer et al, Kim et al. and Gopalakrishnan et al. do not disclose wherein the

data rate of the communications comprises a full rate and less than a full rate, and

wherein said at least a portion of the communications to said one of the subscriber

stations is spread with said one of the orthogonal codes when the data rate of the

communications is the full rate, and wherein said at least a portion of the

communications to said one of the subscriber stations is not spread with said one of the

orthogonal codes when the data rate of the communications is less than the full rate.

Czaja et al. in the same field of endeavor teach wherein the data rate of the

communications comprises a full rate and less than a full rate ("full rate 9600, half rate

4800, quarter rate 2400" interpreted as a full rate and less than a full rate; col. 6, lines 3

– 9), and wherein said at least a portion of the communications to said one of the

subscriber stations is spread with said one of the orthogonal codes when the data rate

of the communications is the full rate (Fig. 6A, col. 11, lines 1 – 14), and wherein said at

least a portion of the communications to said one of the subscriber stations is not

spread with said one of the orthogonal codes when the data rate of the communications is less than the full rate (Fig. 5, col. 10, lines 51 – 67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al, Kim et al. and Gopalakrishnan et al. to include the features of wherein the data rate of the communications comprises a full rate and less than a full rate, and wherein said at least a portion of the communications to said one of the subscriber stations is spread with said one of the orthogonal codes when the data rate of the communications is the full rate, and wherein said at least a portion of the communications to said one of the subscriber stations is not spread with said one of the orthogonal codes when the data rate of the communications is less than the full rate as taught by Czaja et al. in order to provide an apparatus and method for determining the rate of a variable rate encoded data frame (as suggested by Czaja et al., see col. 3, lines 8 – 10).

Regarding claim 14, Scherzer et al. disclose the method, the communication station claimed further comprising spreading a portion of the communications to said one of the subscriber stations with a orthogonal code assigned to the groups (col. 10, lines 60 – 65).

Scherzer et al. do not disclose the communications station claimed wherein the less than full rate comprises a data rate equal to 1/2 the full rate.

Kim et al. teach the communications station claimed wherein the less than full rate comprises a data rate equal to 1/2 the full rate (col. 8, lines 16 – 23).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Scherzer et al. to include the features

of the communications station claimed wherein the less than full rate comprises a data

rate equal to 1/2 the full rate as taught by Kim et al. One of ordinary skill in the art would

be motivated to do so for designating forward spreading code for spreading forward

common control message or short packet user data transmitted on a forward common

channel (as suggested by Kim et al., see col. 3, lines 17 – 19).

Czaja et al. also teach the communications station claimed wherein the less than

full rate comprises a data rate equal to 1/2 the full rate ("half rate 4800" correlates to the

less than full rate comprises a data rate equal to 1/2 the full rate, column 6, lines 3 – 9).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to modify the teachings of Scherzer et al. to include the

features of the communications station claimed wherein the less than full rate comprises

a data rate equal to 1/2 the full rate as taught by Czaja et al. in order to provide an

apparatus and method for determining the rate of a variable rate encoded data frame

(as suggested by Czaja et al., see col. 3, lines 8 – 10).

Regarding claim 15, Scherzer et al. disclose the method, the communication

station claimed further comprising spreading a portion of the communications to said

one of the subscriber stations with a orthogonal code assigned to the groups (col.10,

lines 60 – 65).

Scherzer et al. do not disclose the communications station claimed wherein the

less than full rate comprises a data rate equal to 1/2 the full rate and a data rate equal

to 1/8 the full.

Kim et al. teach wherein the less than full rate comprises a data rate equal to 1/2

the full rate and a data rate equal to 1/8 the full (col. 8, lines 11 – 31).

At time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the teachings of Scherzer et al. to include the features of wherein the less than full rate comprises a data rate equal to 1/2 the full rate and a data rate equal to 1/8 the full as taught by Kim et al. One of ordinary skill in the art would be motivated to do so for designating forward spreading code for spreading forward common control message or short packet user data transmitted on a forward common channel (as suggested by Kim et al., see col. 3, lines 17 – 19).

Czaja et al. also teach the communications station claimed wherein the less than full rate comprises a data rate equal to 1/2 the full rate and a data rate equal to 1/8 the full rate ("half rate 4800bps and eighth rates 1200 bps" correlates to the less than full rate comprises a data rate equal to 1/2 the full rate and a data rate equal to 1/8 the full rate, column 6, lines 3 – 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Scherzer et al. and Kim et al. to include the features of the communications station claimed wherein the less than full rate comprises a data rate equal to 1/2 the full rate as taught by Czaja et al. in order to provide an apparatus and method for determining the rate of a variable rate encoded data frame (as suggested by Czaja et al., see col. 3, lines 8 – 10).

Regarding claim 16, Scherzer et al. disclose the method, the communication station claimed further comprising spreading a portion of the communications to said one of the subscriber stations with a orthogonal code assigned to the groups (col. 10, lines 60 – 65).

Scherzer et al. and Kim et al. do not disclose explicitly the communications

station claimed wherein the encoder comprises a vocoder.

Czaja et al. teach the communications station claimed wherein the encoder

comprises a vocoder ("vocoder" interpreted as the encoder comprises a vocoder, col. 5,

lines 27 – 42).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Scherzer et al. and Kim et al. to include

the features of the communications station claimed wherein the encoder comprises a

vocoder as taught by Czaja et al. in order to provide an apparatus and method for

determining the rate of a variable rate encoded data frame (as suggested by Czaja et

al., see col. 3, lines 8 – 10).

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

7.   Claims 34, 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et

al. (US 6870824 B1).

Regarding claim 34, Kim et al. disclose a method of communications (col. 3,

lines 11 – 13) comprising: receiving a dedicated orthogonal code for a dedicated traffic

channel where the length of the dedicated orthogonal code supports a first data rate

less than a full data rate of a subscriber station (col. 4, lines 49 – 53; col. 7, lines 37 –

42); and receiving an assignment of a plurality of orthogonal codes supports a second

data rate adequate to handle an overflow up to the full data rate of the subscriber

station (1/2 rate; supports a second data rate; col. 6, lines 40 – 47, col. 8, lines 4 – 21).

Regarding claim 36, Kim et al. disclose wherein one of plurality of orthogonal

codes for supplemental channels can be substituted for another one of the plurality of

orthogonal codes on a frame-by-frame basis ("the fundamental channel and the

supplemental channel becomes the traffic channel"; col. 8, lines 47 – 54).

Allowable Subject Matter

8.   Claims 7, 10, 11 are objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

Response to Arguments

9.   Applicant's arguments filed on 7/22/2008 with respect to claims 1 – 17, 29 – 36

have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

    a) Willenegger et al. (US 20030224798 A1).

    b) Weaver Jr. (6044103).

11.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Andrew C. Lee whose telephone number is (571)272-
3131. The examiner can normally be reached on Monday through Friday from 8:30am -
5:00pm.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for
the organization where this application or proceeding is assigned is 571-273-8300.

    Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
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USPTO Customer Service Representative or access to the automated information
system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew C Lee/
Examiner, Art Unit 2619
<9/18/2008>

/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2619